

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered). Please AMEND claims 12 and 22, and ADD new claim 23 in accordance with the following:

Claims 1-4 (canceled)

5. (previously presented - allowed) A motion vector encoding device for encoding motion vectors of respective blocks obtained by partitioning each frame of moving image data, comprising:

predicting means for predicting a motion vector of a target block based on motion vectors of a plurality of blocks adjacent to the target block;

determining means for determining accuracy of a prediction made by said predicting means based on degrees of non-uniformity of the plurality of motion vectors; and

encoding means for encoding the motion vector of the target block using a result of the prediction made by said predicting means with an encoding method determined based on a result of a determination made by said determining means, and wherein:

said predicting means comprises first and second predicting means for respectively predicting first and second components of the motion vector of the target block;

said determining means comprises

first determining means for determining the accuracy of the prediction made by said first predicting means based on degrees of non-uniformity of respective first components of the plurality of motion vectors, and

second determining means for determining the accuracy of the prediction made by said second predicting means based on degrees of non-uniformity of respective second components of the plurality of motion vectors, a first component of the motion vector of the target block, and the respective first components of the plurality of motion vectors; and

said encoding means comprises

first encoding means for encoding the first component of the motion vector of the target block by using a result of a prediction made by said first predicting means with an encoding

method determined based on a result of a determination made by said first determining means, and

second encoding means for encoding the second component of the motion vector of the target block by using a result of a prediction made by said second predicting means with an encoding method determined based on a result of a determination made by said second determining means.

Claims 6-10 (canceled)

11. (previously presented) A motion vector decoding device for decoding an encoding result which is obtained by encoding motion vectors of respective blocks obtained by partitioning each frame of moving image data, comprising:

predicting means for predicting a motion vector of a target block based on motion vectors of a plurality of blocks adjacent to the target block;

determining means for determining accuracy of a prediction made by said predicting means based on degrees of non-uniformity of the plurality of motion vectors; and

decoding means for decoding the motion vector of the target block by using a result of the prediction made by said predicting means with a decoding method determined based on a result of a determination made by said determining means.

12. (currently amended) A motion vector decoding device for decoding an output of a motion vector encoding device which predicts a motion vector of a target block within a frame based on motion vectors of a plurality of blocks adjacent to the target block within the frame, determines accuracy of a prediction based on degrees of non-uniformity of a plurality of motion vectors which have already been encoded in an area adjacent to the target block, and encodes the motion vector of the target block by using a result of the prediction with an encoding method determined based on a result of a determination of the accuracy of the prediction, in order to encode motion vectors of respective blocks obtained by partitioning each frame of moving image data, comprising:

predicting means for predicting the motion vector of the target block within the frame based on the plurality of motion vectors of the at least two of the plurality of blocks adjacent to the target block used to make the determination within the motion vector encoding device;

determining means for determining accuracy of a prediction made by said predicting means based on the degrees of non-uniformity of the plurality of motion vectors by determining whether differences between any of the vectors is greater than a threshold; and

decoding means for decoding the motion vector of the target block by using a result of the prediction made by said predicting means with a decoding method determined based on a result of a determination made by said determining means.

13. (previously presented) A motion vector decoding method for decoding a result of encoding obtained by encoding motion vectors of respective blocks obtained by partitioning each frame of moving image data, comprising the steps of:

predicting a motion vector of a target block based on motion vectors of a plurality of blocks adjacent to the target block;

determining accuracy of a prediction based on degrees of non-uniformity of the plurality of motion vectors; and

decoding the motion vector of the target block by using a result of the prediction with a decoding method determined based on a result of a determination of the accuracy of the prediction.

14. (previously presented) The motion vector decoding device according to claim 11, wherein said determining means determines the accuracy of the prediction made by said predicting means based on the degrees of non-uniformity of the plurality of motion vectors which have already been decoded in an area adjacent to the target block.

15. (previously presented) The motion vector decoding device according to claim 12, wherein said determining means determines the accuracy of the prediction made by said predicting means based on the degrees of non-uniformity of the plurality of motion vectors which have already been decoded in an area adjacent to the target block.

16. (previously presented) The motion vector decoding device according to claim 13, wherein said determining means determines the accuracy of the prediction made by said predicting means based on the degrees of non-uniformity of the plurality of motion vectors which have already been decoded in an area adjacent to the target block.

17. (previously presented) The motion vector decoding device according to claim 11, wherein said encoding means comprises:

a plurality of individual decoding means for decoding the motion vector of the target block with unique decoding methods; and

selecting means for selecting one of said plurality of individual decoding means based on

the result of the determination made by said determining means, and for outputting a result of decoding performed by the selected individual decoding means.

18. (previously presented) The motion vector decoding device according to claim 12, wherein said encoding means comprises:

a plurality of individual decoding means for decoding the motion vector of the target block with unique decoding methods; and

selecting means for selecting one of said plurality of individual decoding means based on the result of the determination made by said determining means, and for outputting a result of decoding performed by the selected individual decoding means.

19. (previously presented) The motion vector decoding device according to claim 13, wherein said encoding means comprises:

a plurality of individual decoding means for decoding the motion vector of the target block with unique decoding methods; and

selecting means for selecting one of said plurality of individual decoding means based on the result of the determination made by said determining means, and for outputting a result of decoding performed by the selected individual decoding means.

20. (previously presented) A motion vector decoding device for decoding an output of a motion vector encoding device which predicts a motion vector of a target block based on motion vectors of a plurality of blocks adjacent to the target block, determines accuracy of a prediction based on a plurality of motion vectors which have already been encoded in an area adjacent to the target block, and encodes the motion vector of the target block by using a result of the prediction with an encoding method determined based on a result of a determination of the accuracy of the prediction, in order to encode motion vectors of respective blocks obtained by partitioning each frame of moving image data, comprising:

predicting means for predicting the motion vector of the target block based on the plurality of motion vectors used to make the determination within the motion vector encoding device;

determining means for determining accuracy of a prediction made by said predicting means based on the degrees of non-uniformity of the plurality of motion vectors; and

decoding means for decoding the motion vector of the target block by using a result of the prediction made by said predicting means with a decoding method determined based on a result of a determination made by said determining means.

21. (previously presented) A motion vector decoding device for decoding an encoding result which is obtained by encoding motion vectors of respective blocks obtained by partitioning each frame of moving image data, comprising:

predicting means for predicting a motion vector of a target block based on motion vectors of a plurality of blocks adjacent to the target block;

determining means for determining accuracy of a prediction made by said predicting means based on the plurality of motion vectors; and

decoding means for decoding the motion vector of the target block by using a result of the prediction made by said predicting means with a decoding method determined based on a result of a determination made by said determining means.

B¹ 22. (currently amended) A motion vector decoding method for decoding a result of encoding obtained by encoding motion vectors of respective blocks obtained by partitioning each frame of moving image data, comprising:

predicting a motion vector of a target block within a frame based on motion vectors of a plurality of blocks adjacent to the target block within the frame;

determining accuracy of a prediction based on the plurality of motion vectors by determining whether differences between any of the vectors is greater than a threshold; and

decoding the motion vector of the target block by using a result of the prediction with a decoding method determined based on a result of a determination of the accuracy of the prediction.

23. (new) A method as recited in claim 22, wherein the motion vectors comprise first, second and third motion vectors said determining comprises:

determining a first absolute value of difference between the first and second motion vectors, determining a second absolute value of difference between the second and third motion vectors, and determining a third absolute value of difference between the first and third motion vectors;

comparing the first absolute value to the threshold, comparing the second absolute value to the threshold and comparing the third absolute value to the threshold; and

indicating that the prediction is not accurate when any of the first, second and third absolute values are greater than the threshold.